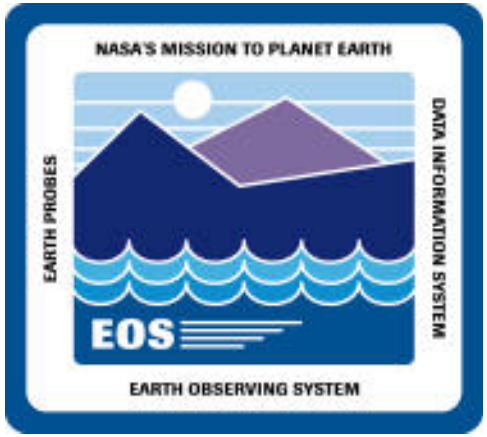


Creating a New ESDT Drill-Down

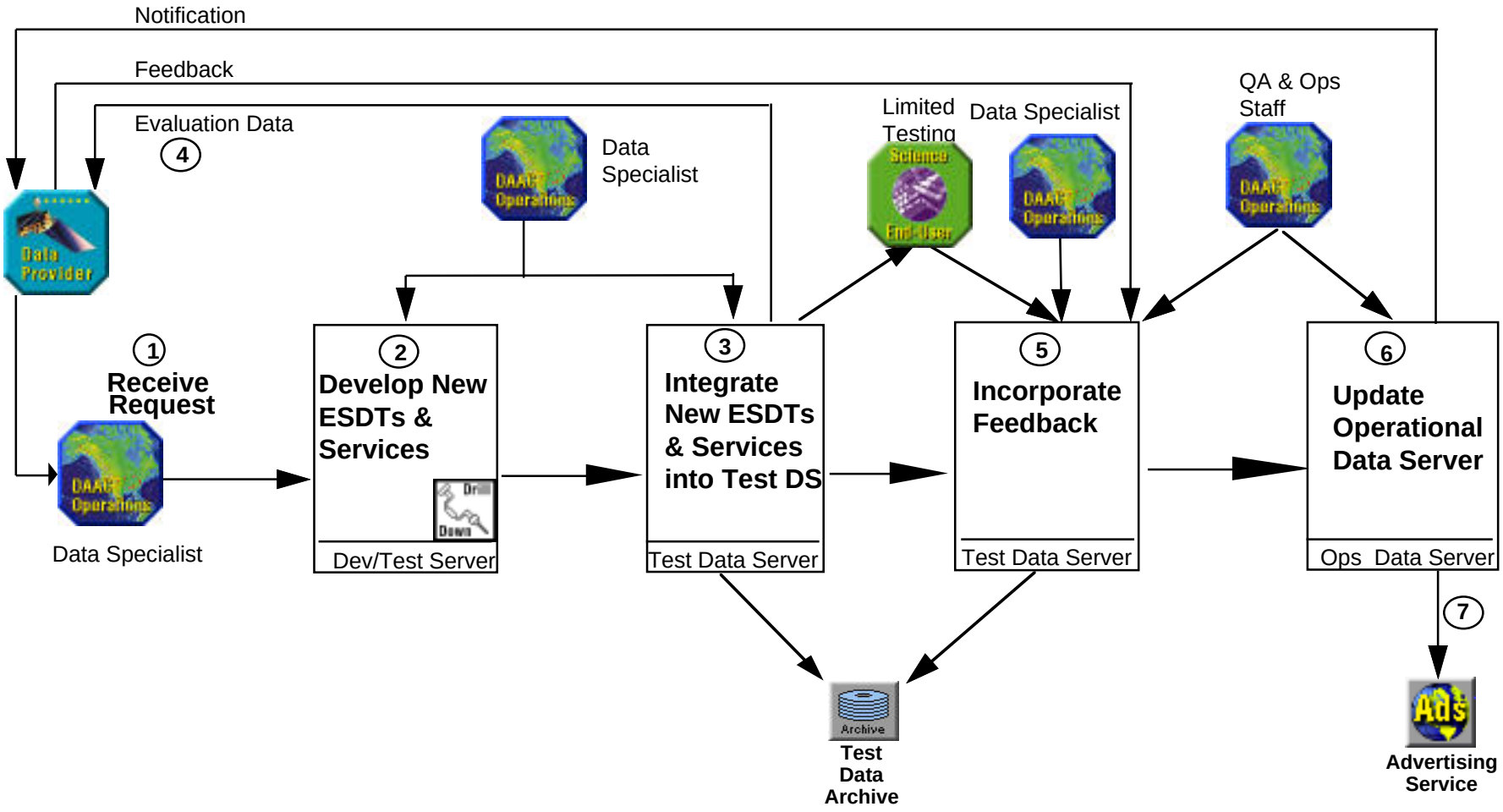
Michael Burnett

mburnett@eos.hitc.com

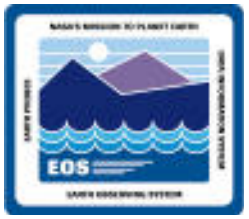
30 October 1995

Building ESDTs & Services for a Collection

Functional Flow



Overview



New ESDTs

- Data objects offered by the Data Server are typed into ESDTs
- Point of customization for DAACs and Data Servers to support different data products
- ECS providing the first set of ESDTs (See Data Type Services Matrix, DID 304-CD-005-001, App. F)
- Further detail in DID 305, Volume 24

ECS Context

- Data Server Subsystem

Scenario Context

- Push Scenario
  - Building the Collection & Services
  - Advertising Collection at the Collection Level
  - Creating Extensions
  - Advertising Extensions

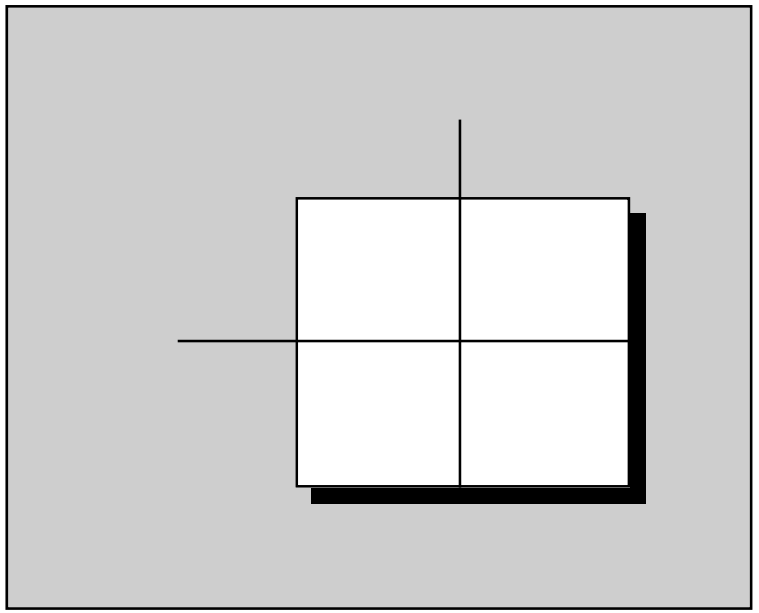
Design Drivers

Architectural Drivers

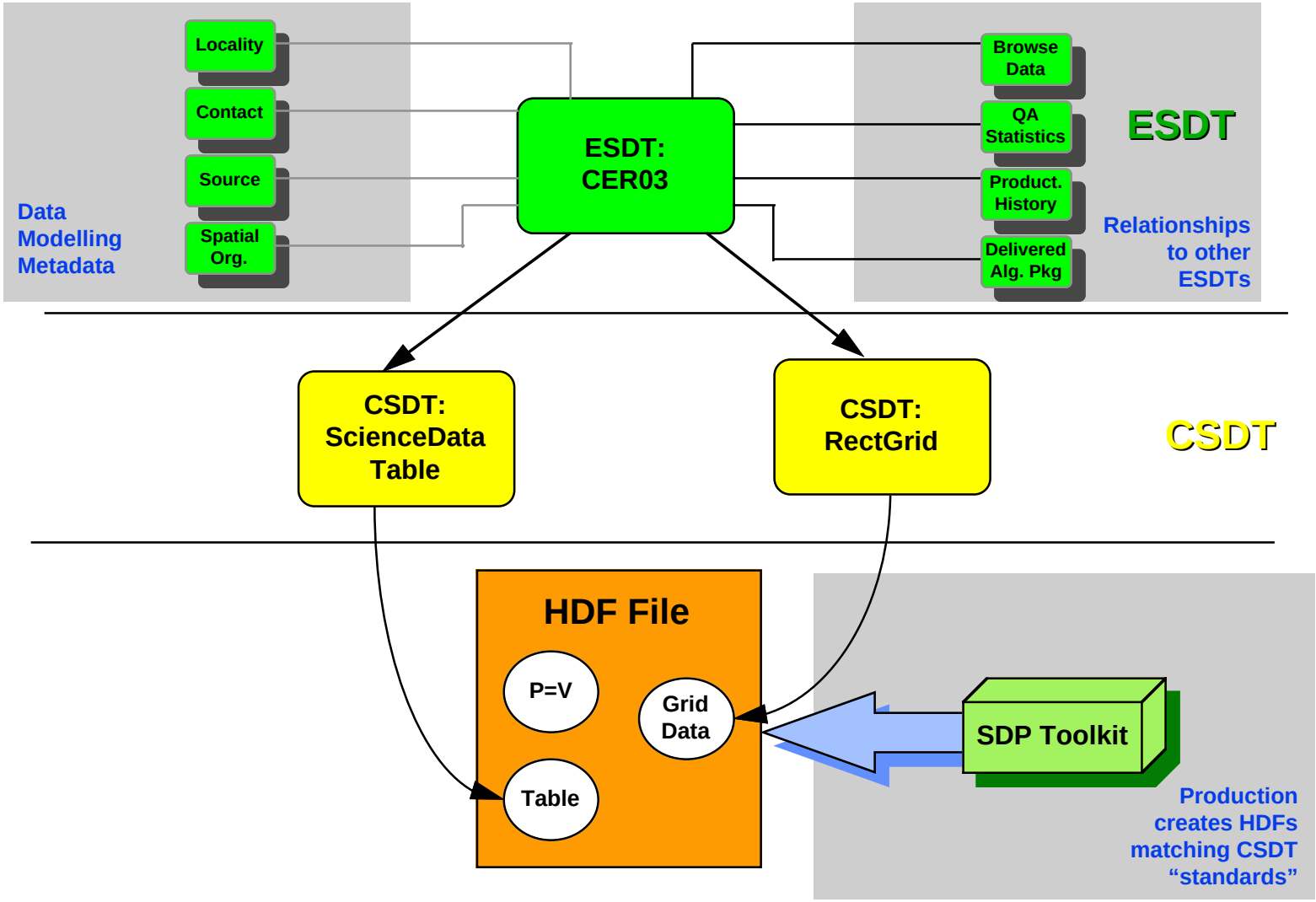
- Need for support of different types of data
- Need for support of different services
- Need to support dynamic types and services
- No impact to operational system

New Release B features

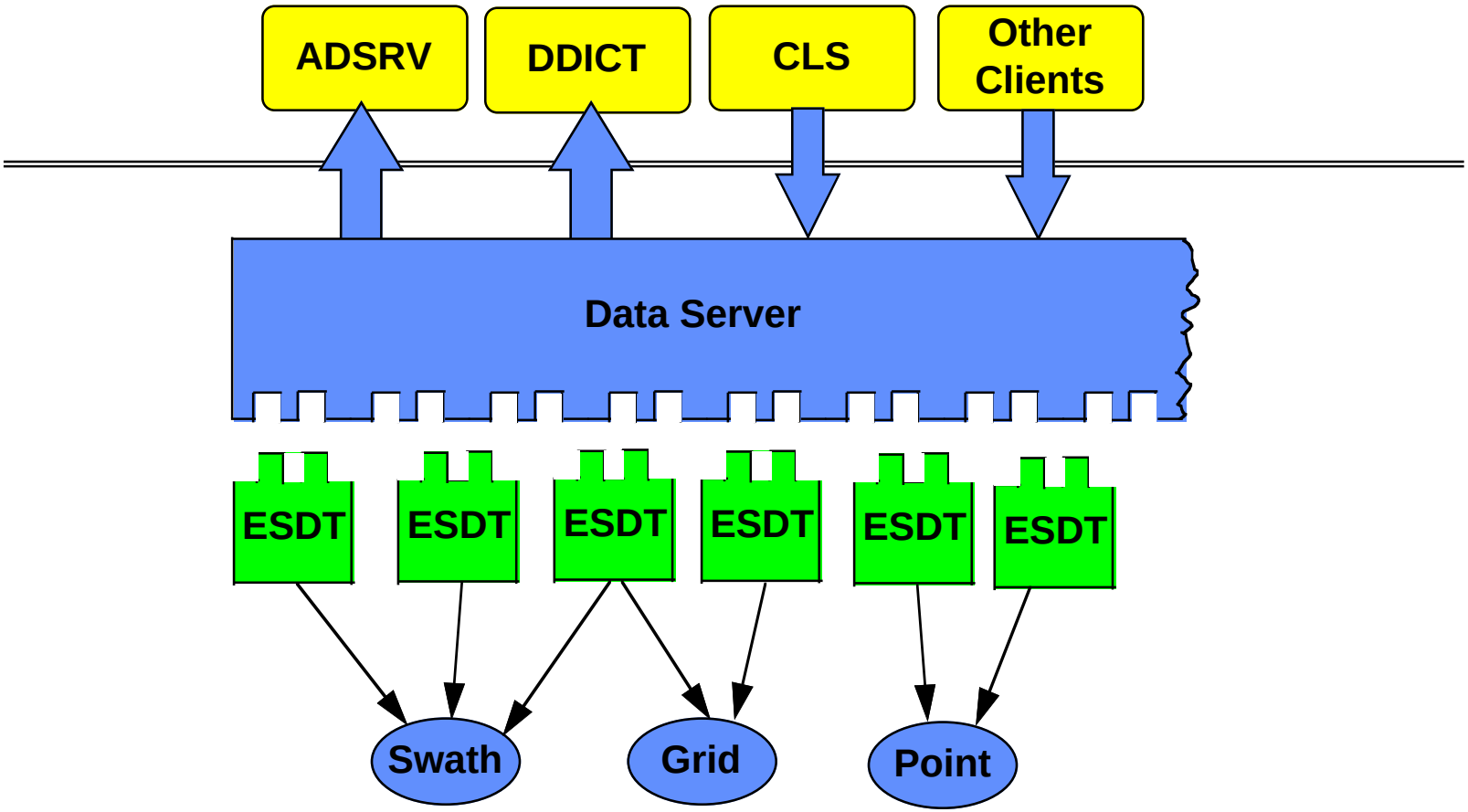
- No architectural changes
- Administration Tools
- Set of Data Types



General ESDT Model

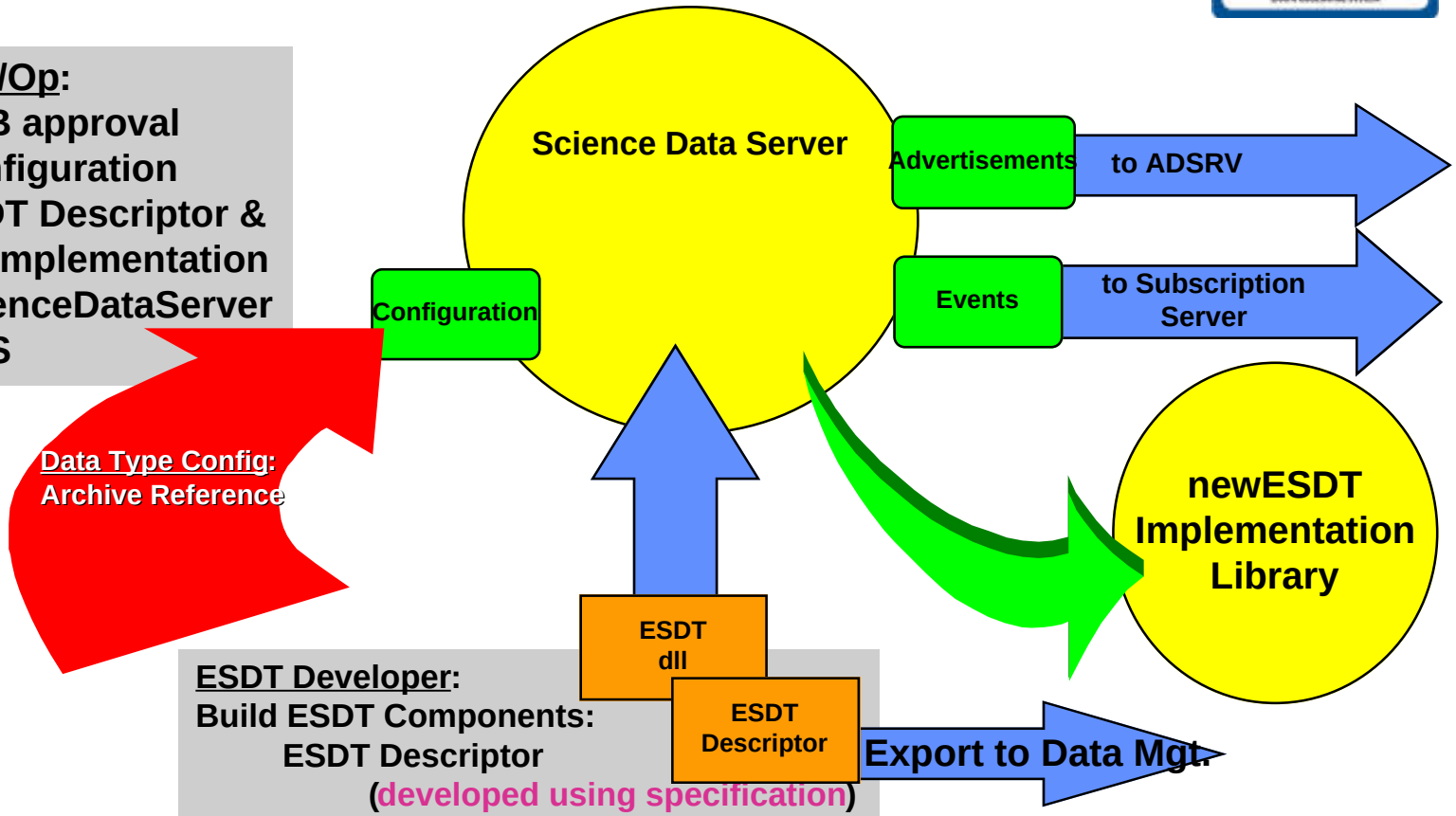


ESDTs in the Data Server



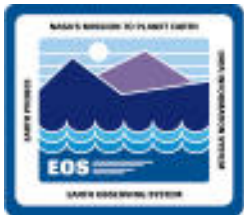
Adding a new ESDT – Operational Overview

DSS Admin/Op:
Ensure CCB approval
Update Configuration
Collect ESDT Descriptor &
ESDT Implementation
Update ScienceDataServer
Update MSS



ESDT Developer:
Build ESDT Components:
ESDT Descriptor
(developed using specification)
Dictionary data
Service data
Event data
Validation data
ESDT DLL
(developed using guidelines)

Evolutionary Features



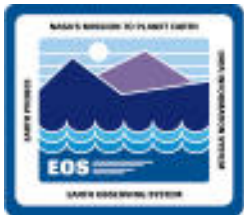
Potential Future Enhancements

- Operational/Administration Tools
- Extension of types and services
- Service Implementations

Scalability

- Module concept allow ESDTs to be implemented as part of any number of data servers
- Separation of Implementation from Interface allows tremendous flexibility in how services are implemented

Current Status



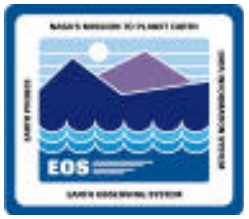
COTS Selections

- HDF (as part of EOS-HDF, for some service implementations)

Next Steps

- Stability of the initial ESDTs
- Operational and Developer Document on ESDTs

Summary



Adding a new ESDT highlights

- ESDTs are the objects that the Data Server offers
- ESDT Descriptor is single source point of ESDT descriptive information
- Supports varied Service Implementations
- Allow run-time changes
- Directly supports extensibility